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EP 0 832 032 B1

(12)

EUROPEAN PATENT SPECIFICATION

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(54) FLEXIBLE VESSELS FOR TRANSPORTING FLUENT CARGOES

DEHNBARE BEHÄLTER ZUM TRANSPORT VON FLÜSSIGEN LADUNGEN CONTENEURS SOUPLES SERVANT A TRANSPORTER DES CHARGEMENTS DE MATIERES COULANTES

(84) Designated Contracting States:

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC

NL PT SE

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CLAIMS:

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- Apparatus for transporting fluent cargo through
 liquid comprising one or more units arranged substantially in linear alignment, wherein at least one said unit comprises two or more flexible containers close coupled side by side.
- Apparatus according to claim 1, wherein in use,
 adjacent facing sides of respective containers of said at least one unit are substantially parallel along at least part of their length.
- 3. Apparatus according to claim 1 or 2, wherein no two consecutive linearly aligned units comprise a single flexible container.
 - 4. Apparatus according to any preceding claim, wherein each container has angled, front and rear end sections.
 - 5. Apparatus according to any preceding claim, wherein each container is parallel sided.
- 6. Apparatus according to any preceding claim, wherein the container is diamond-shaped or hexagonal.
 - 7. Apparatus according to any preceding claim, wherein the containers are connected at their broadest extent.
- 8. Apparatus according to any preceding claim, wherein the apparatus comprises alternating sequential units of one and two containers.
- 9. Apparatus according to any preceding claim, wherein 35 the apparatus comprises three units of one container and two units of two containers.

10. Apparatus substantially as hereinbefore described with reference to the accompanying drawings.

WO 97/02980

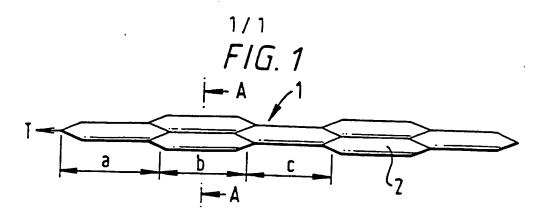
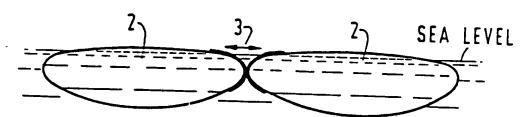
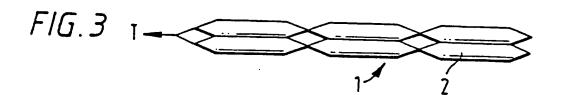
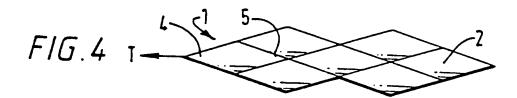
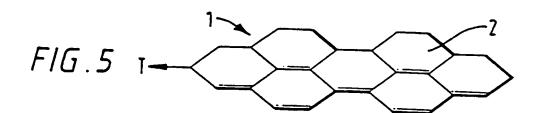


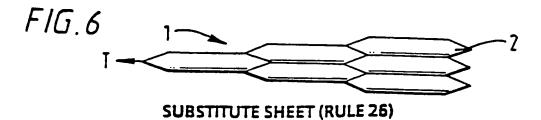
FIG. 2











INTERNATIONAL SEARCH REPORT

tronal Application No

PCT/GB 96/01634 A. CLASSIFICATION OF SUBJECT MATTER IPC 6 B63B35/28 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 6 B63B B65D Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Category * Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. FR.A.2 210 180 (GRIHANGNE) 5 July 1974 X 1,2,10 Y see page 3, line 24 - page 4, line 2; 3-7 figures 1,2 X FR,A,2 377 931 (LEDUN) 18 August 1978 1.2 see the whole document Y US,A,3 983 830 (MORGAN) 5 October 1976 3.7 see figures 1-6 US,A,3 289 721 (BENSON) 6 December 1966 4.5 see figures 1,2 GB,A,2 181 996 (YANG) 7 May 1987 see figures 1-2,1-3 -/--X . Further documents are listed in the continuation of box C. Patent family members are listed in annex. Ix I Special categories of cated documents : T later document published after the international filing date or priority date and not in conflict with the application but died to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance 'E' earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such document, such combination being obvious to a person skilled in the art. 'O' document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed "A" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 24 October 1996 29.10.96 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Ripswith Td. (+31-70) 340-2040, Ta 31 651 epo nl, Fax (+31-70) 340-3016

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INTERNATIONAL SEARCH REPORT

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